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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,161	08/01/2006	Tatsuya Fukunaga	125760	4206
25944 7590 06/16/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
LEE, BENNY T				
ART UNIT		PAPER NUMBER		
2817				
MAIL DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/588,161

Applicant(s)

FUKUNAGA, TATSUYA

Examiner

Benny Lee

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 1 Aug 2006 & 15 Jan 2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

The disclosure is objected to because of the following informalities: Page 2, in the heading, note that "Disclosure of" should be rewritten as --Summary of the-- for consistency with PTO guidelines. Page 3, lines 7, 8; page 4, second & third lines from the bottom; page 9, lines 5, 6: note that it is unclear how or why "the width" of the "electrode" should be characterized by a "length L" (i.e. "width" & "length" appear to be distinctive dimensions). Clarification is needed. Appropriate correction is required.

The drawings are objected to because of the following: In FIGS. 1 & 2, note that collective reference labels --2-- & --3-- should be respectively provided as to be commensurate with the specification description.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, note that the recitation “the width of each of the sub ground electrodes is specified as length L or longer” is vague in meaning as to how a dimension such as “width” can be “specified as length L or longer”, especially since it has not been established as to what constitutes the “length L”. Clarification is needed.

In claims 3, 4, note that it is unclear what feature(s) of the electrodes is/are characterized by “an inner end face”. Clarification is needed. Note that “the length L” lacks strict antecedent basis. Also, note that reference to “a region facing the region” is vague in meaning and needs clarification.

In claims 5, 6, 7, 8, note that it is unclear what feature(s) of the electrodes is/are characterized by the “side of outer end faces”. Clarification is needed.

The following claims have been found to be objectionable for reasons set forth below:

In claims 3, 4, 5, 6, 7, 8, note that “formed” should be rewritten as --disposed-- at each occurrence for an appropriate characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Uchimura et al patent.

Uchimura et al (Figs. 12-15) discloses a rectangular waveguide comprising: a pair of main ground electrodes (i.e. upper main conductive layer 2; lower main conductive layer 3) aligned in parallel to each other with a dielectric (i.e. dielectric substrate 1) in between; a pair of

side walls defined by a plurality of sub-conductive layers (6) stacked in parallel with and disposed in between the upper main conductive layer (2) and the lower main conductive layer (3), as best shown in Figs. 12 & 14. Also, as evident from Figs. 12 & 14, a fixed interval is provided between adjacent ones of the parallel sub-conductive layers (6) in a direction orthogonal to the direction of the upper and lower main electrodes (2, 3). Furthermore, as described at column 13, line 19, the laminated waveguide (i.e. the stacked conductive layers collective define a waveguide structure which is characterized by a "laminate") operates in a "TM₁₁" mode of propagation in the dielectric region (1) between the upper and lower main electrodes (2, 3) and the stacked sub-conductive layers (6), which defines the laminate rectangular waveguide.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishikawa et al discloses a planar dielectric line defined by a laminate of upper and lower conductive layers and stacked conductive sub-layers functioning as a waveguide, but operating in the TE mode, rather than the claimed TM mode. Den pertains to a waveguide having resistive strips disposed therein for undesired mode absorption.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

**/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817**

B. Lee